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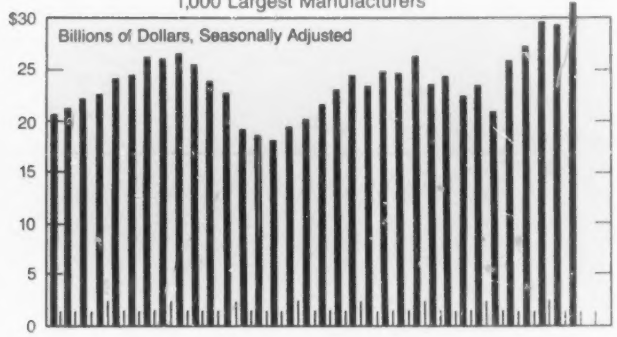
Economic and Business Environment Program

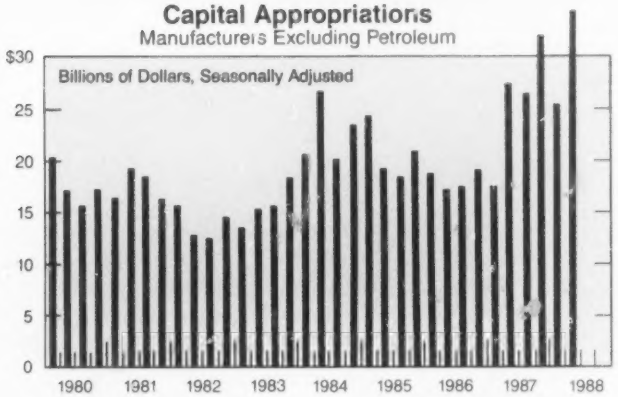
Manufacturing Investment Outlook

Capital Expenditures
1,000 Largest Manufacturers



Capital Appropriations
1,000 Largest Manufacturers

Capital Appropriations
Manufacturers Excluding Petroleum



Source: The Conference Board

OVERVIEW:

All the latest data show that the rising trend in U.S. business investment continued through the first half of this year. Hikes in interest rates have had little impact, since producers are relying very heavily on internal financing.

Still, there are now some indications that capital investment could weaken. And if economic activity slows in 1989, more modest profits could translate into a drop in the internal funds that are currently fueling capital investment growth.

The Conference Board's survey of Capital Appropriations and Expenditures by the nation's 1,000 largest manufacturers for the second quarter of 1988 showed that investment trends were bullish. Spending on plant and equipment rose strongly, as did the approval of new spending plans, resulting in a further build up in the backlog of approved but as yet unspent appropriations. The survey revealed that respondents expected investment for the remainder of 1988 to remain quite strong.

SUMMARY OF SURVEY RESULTS

Capital expenditures by the U.S.'s 1,000 largest manufacturers rose by 7% in the second quarter, after a 1.4% dip in the prior quarter. Altogether spending on plant and equipment was 21% higher in the second quarter of 1988 than one year earlier.

Capital appropriations (approval of new spending plans) rose a substantial 28.6% in the second quarter, after a 14.1% decline the prior quarter. The backlog of approved but as yet unspent appropriations, which has been building steadily, increased by 10% in the second quarter. These figures indicate that the upward trend in capital investment is very likely to continue in the second half of 1988.

That is also the message conveyed by the survey respondents. The Conference Board's forecast is for nominal GNP to rise by about 7 1/2% this year. Manufacturing executives plan to raise their capital spending, as well as their new appropriations, by a higher percentage. This suggests that they expect the strong investment trend to carry into next year as well, which makes them appear more bullish in outlook than most economic forecasters.

CURRENT INDUSTRIAL CONDITIONS

Industrial conditions (over the twelve months ending in September 1988) have been very strong and are not likely to

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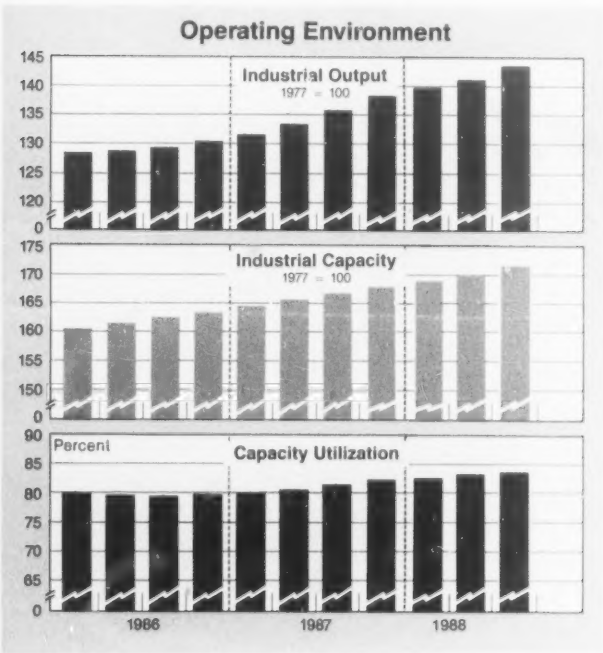
dissipate quickly. The outlook for 1989, however, shows some weakening.

• Industrial production: The output of consumer durables was 5.6% higher in September than one year earlier. Producers equipment, except defense related, was 10% higher. But total industrial production is expected to be up by only 0.6% 12 months from now.

• Capacity utilization for durable-goods' industries was at 82.4% in September 1988, up sharply from 78.4% one year earlier. Utilization in nondurable-goods'industries stood at 85.8% in September, roughly unchanged from 85.5% one year earlier. Booming investment in nondurable-goods' industries offset rising production, and, therefore, the intensity of resource use remained relatively unchanged. Investment has not been quite as strong among durable-goods' industries; thus, rising industrial output has markedly intensified resource use.

• New orders for durable goods, except defense related, were 17.6% higher in September 1988 than one year ago. But the ratio of unfilled orders to filled orders was only 2.7% higher. That indicates that production schedules have been stepped up to match the brisk ordering rate.

• Inventory, except cars at the retail level, was 8.9% higher in August 1988 than one year ago, but that rapid build up merely kept the Inventory-to-Sales ratio at the same level this summer as one year ago. Given no significant overhang of unfilled orders and ample inventory, industrial production will turn sluggish if the ordering pace slows.



Sources: Federal Reserve Board ; The Conference Board

• Prices of raw industrial metals were 17% higher in September 1988 than one year ago. New orders for primary metals leapt 20% over the same period, reflecting very strong industrial demand. If this rise slows, as anticipated, metal price hikes should also moderate. Conversely, continued upward pressure on metal prices would adversely affect the depth and breath of capital investment.

• Exports of manufactured goods were 32% higher in August than one year ago. However, the rise has been more moderate recently.

• Imports of capital goods, except cars, was 24% higher in August than one year ago. That surge is not surprising, given the robust pace of plant and equipment spending. Exports of capital goods, except cars, were up 35 percent. At least in this category, the U.S. is running a surplus and that trend is likely to continue.

• Manufacturing productivity was 2.8% higher in the second quarter of 1988 than one year earlier; hourly compensation was only 3.2% higher. Thus, the rise in unit labor costs, 0.3% versus one year earlier, was almost flat. Modest increases in production costs have helped boost profit margins, providing the wherewithal for the surge in investment. Despite concern that the economy might overheat, sending hourly wage rates much higher, there is little evidence of change in basic trends.

• Manufacturing after-tax profits were 32% higher in the second quarter of 1988 than one year earlier. Profits averaged 6.3 cents (on one dollar of sales) in the second quarter, compared with 5.3 cents one year earlier.

• Total business after-tax profits are expected to be about 1.7% lower in the fourth quarter of 1989 than in the fourth quarter of 1988. That forecast, consistent with trends in the financial markets, is more the result of an expected slowdown in sales than of a rise in production costs. This decline in profits is the most important change in the investment climate anticipated for the next several quarters.

• Nonresidential fixed investment was 7.8% higher in the third quarter of 1988 than one year earlier. The rate of increase is expected to slow, but only to 5.3% over the next four quarters.

• Foreign direct investment in the United States continues to mirror domestic trends. The current strong pace of domestic spending on plant and equipment, favorable economic conditions, a lower dollar, and an improved trade balance are inducing strong foreign investment. However, Commerce Department survey data suggest that the pace of foreign investment is likely to tail off sharply in 1989.

• Commerce Department data show that the average age of capital goods rose steadily, from about 5.5 years in 1982 to almost 6 years in 1986 (close to the highest average reached during the postwar period). The average fell in 1987 and may improve further, given the ongoing rise in equipment spending.

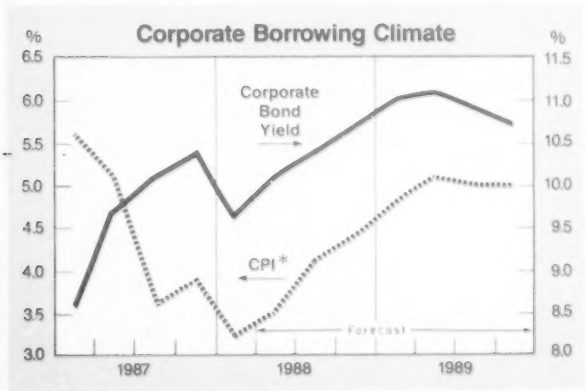
SECOND-QUARTER SURVEY RESULTS:

INDUSTRY DETAIL: DURABLE-GOODS' MANUFACTURING: Despite a quite rapid rise in industrial production, capacity utilization rates haven't gone through the roof, in part because the strong pace of investment has added new capital resources. The latest survey results suggest that capital investment could be losing some forward momentum.

- Total appropriations for durable-goods' industries were 8.9% lower in the second quarter of 1988 than in the fourth quarter of 1987, compared with a 10.5% gain for all manufacturing.
- Total expenditures by durable-goods' industries were 2.1% higher in the second quarter of 1988 than two quarters earlier, compared with a 5.5% rise for all manufacturing, despite the drop in planned expenditures.
- The backlog of unspent appropriations for durable-goods' industries was 2.6% higher in the second quarter of 1988 than two quarters earlier, compared with a 10.9% rise for all manufacturing.

Capital spending by durable-goods' manufacturers rose 3.7% in the second quarter, after a slight 1.6% decline in the prior quarter. Six of these industries show a net rise in capital spending over this two-quarter period and four declined. Electrical machinery led the pack with a 25% net rise in spending. That status could soon change, however: Planned spending (new appropriations) fell 3.5% over the same period and the backlog of approved but as yet unspent appropriations was only 3% higher.

A similar investment picture held for some of the primary processing industries. Spending by iron and steel producers rose by 18% over the last two quarters; but new appropriations declined by almost the same amount, and the backlog of unspent appropriations fell 10 percent. The picture for nonferrous metals, as well as for the rubber industry, is quite similar.In contrast, stone, clay, and glass firms experienced only a modest rise in spending (6.9%), a slight rise in appropriations (3.7%), and almost no change in the backlog of unspent appropriations.



* Annualized percentage change from previous quarter

The advanced-processing durable-goods' industries (except electrical machinery) showed declines in planned and actual spending over the last two quarters. Apparently, strategic planners in these industries are heeding the forecast warnings of slower economic growth ahead. The trend was most pronounced in the motor vehicle and non- electrical goods' industries. Car makers dropped their capital spending by 43%, while planned spending fell by 40%—resulting in a 4.9% drop in the backlog of unspent appropriations. The decline in new appropriations in the second quarter of 1988 compared with two quarters earlier, for the non-electrical goods' industry was similar, but the drop in spending was only half that of the car makers. Consequently, there was a rise in unspent backlogs—which may be worked off in 1989.

NONDURABLE-GOODS' MANUFACTURING: The pressure on productive capacity, which was severe, has worsened. The rule of thumb is that problems develop more quickly once capacity utilization rises above 85 percent. It is currently running at about 88% for nondurable-goods' manufacturers. That helps explain why the surge in capital investment remains stronger for these industries than for the durable-goods' group:

- Total appropriations rose 36% over the last two quarters, versus the 8.9% decline for durable-goods' industries.
- Capital spending rose 9.6%, versus the 2.1% rise for the durable-goods' industries.
- The backlog of unspent appropriations rose 17.6%, versus a 2.6% rise for durable-goods' industries.

Rubber remains the leader among the nondurable-good's industries, with a 49% rise in capital spending over the last two quarters. Yet its new appropriations fell 41% over the same period, reducing its backlog of unspent appropriations by 18 percent. That suggests its big build up in capital investment is leveling off.

The lead might well pass to the paper industry. Given its recent history of extremely high capacity utilization, it is not surprising that capital investment has risen 34% over the last two quarters; planned spending (new appropriations) almost tripled.

Textiles, another industry operating at high capacity, had a mere 8.6% capital investment rise over the last two quarters, but planned spending was doubled.

The chemical industry also has a relatively high capacity utilization rate. But its capital investment and planned spending rose a relatively modest 7% and 6%, respectively, over the last two quarters. Those numbers suggest that the short-term prospects for sharp increases in demand for domestic chemicals are not good.

Oil prices were continuing a modest recovery in the second quarter. The petroleum industry raised planned spending by 37% but only increased capital spending by 2 percent. Oil prices have since declined.

AVAILABILITY & ADEQUACY— CAPACITY & FUNDING

The sustained rise in investment has helped to reduce potential inadequacies in productive capacity. Survey results show that fewer manufacturing executives are now concerned about such shortages. Only 17.5% of the durable-goods' respondents said their facilities were insufficient relative to the rate of new orders. And that marks the second consecutive quarterly decline in such responses.

SOURCING OF FUNDS

To no one's surprise, most survey respondents said that the aim of their capital investment program is to expand productive capacity. Equally evident, respondents have been saying for some time that obtaining external financing hasn't gotten any easier. Given the multiple hikes in interest rates this past spring and summer, responses to this question did not change in the latest survey.

Ken Goldstein
October 20, 1988

TABLE 1
SEASONALLY ADJUSTED DATA IN MILLIONS OF CURRENT DOLLARS

	CURRENT DOLLARS						PERCENT CHANGE OVER PRIOR QUARTER			
	I-87	II-87	III-87	IV-87	I-88(r)	II-88(p)	III-87 to IV-87	IV-87 to I-88	I-88 to II-88	II-87 to II-88
ALL MANUFACTURING										
Opening backlog	69,720	69,171	74,635	74,554	78,061	78,709				
Newly approved	21,441	32,257	29,561	35,909	30,846	39,682	21.5%	-14.1%	28.6%	23.0%
Canceled	1,189	860	2,261	2,582	786	378				
Capital expenditure	20,801	25,933	27,381	29,820	29,412	31,469	8.9%	- 1.4%	7.0%	21.3%
Closing backlog	69,171	74,635	74,554	78,061	78,709	86,544	4.7%	0.8%	10.0%	16.0%
MANUFACTURING EX. PETROLEUM										
Opening backlog	53,015	51,468	55,369	57,685	62,514	62,463				
Newly approved	17,513	27,227	26,503	32,084	25,470	34,451	21.1%	-20.6%	35.3%	26.5%
Canceled	1,354	540	750	1,547	372	-16				
Capital expenditure	17,706	22,786	23,437	25,708	25,149	27,270	9.7%	- 2.2%	8.4%	19.7%
Closing backlog	51,468	55,369	57,685	62,514	62,463	69,660	8.4%	- 0.1%	11.5%	25.8%
DURABLE GOODS										
Opening backlog	28,261	26,190	28,498	31,430	35,236	33,637				
Newly approved	9,746	16,515	17,208	20,245	14,310	18,442	17.6%	-29.3%	28.9%	11.7%
Canceled	693	201	306	402	129	-453				
Capital expenditure	11,124	14,006	13,970	16,037	15,780	16,368	14.8%	- 1.6%	3.7%	16.9%
Closing backlog	26,190	28,498	31,430	35,236	33,637	36,164	12.1%	- 4.5%	7.5%	26.9%
NONDURABLE GOODS										
Opening backlog	41,459	42,981	46,137	43,124	42,825	45,072				
Newly approved	11,695	15,742	12,353	15,664	16,536	21,240	26.8%	5.6%	28.4%	34.9%
Canceled	496	659	1,955	2,180	657	831				
Capital expenditure	9,677	11,927	13,411	13,783	13,632	15,101	2.8%	- 1.1%	10.8%	26.6%
Closing backlog	42,981	46,137	43,124	42,825	45,072	50,380	- 0.7%	5.2%	11.8%	9.2%

Note: Due to a change in weighting procedure, data prior to second quarter 1987 may not be comparable to survey results after that date.

The Conference Board

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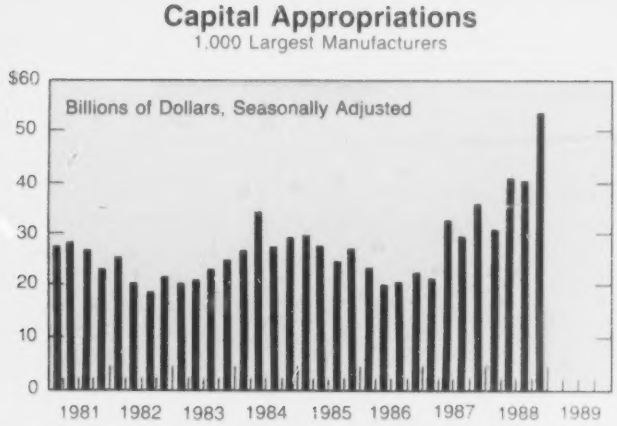
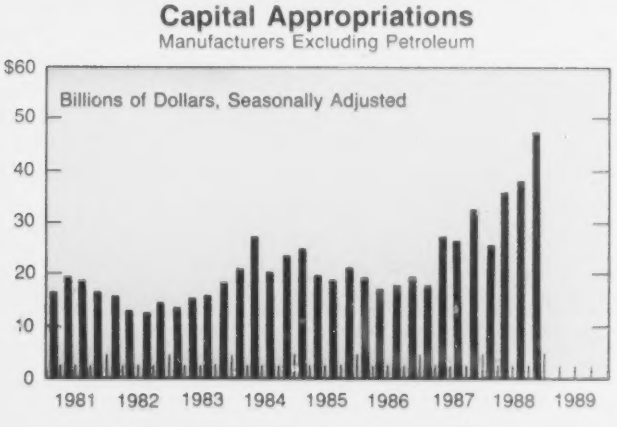
Manufacturing Investment Outlook

Volume 3, Number 2 Spring 1989





Source: The Conference Board

OVERVIEW:

The rising trend in U.S. *business investment* remained vigorous in the second half of 1988. Since manufacturers relied heavily on internal funding, the impact of successive interest-rate hikes was limited. That could change if, as many predict, profit growth comes to a halt by midyear. Even if the economy forces some project curtailment or postponement, once economic expansion resumes, manufacturers will attempt to reinstate their aggressive investment plans.

The Conference Board's survey of Capital Appropriations and Expenditures of the nation's largest manufacturers for the fourth quarter of 1988 showed that investment trends remained upbeat. Spending on plant and equipment continued to rise sharply, which came as no surprise. Appropriations (approval of new spending plans), however, were also quite strong, which was not anticipated. Appropriations were expected to show only modest increases, given a slight decline in the third-quarter survey, rising interest rates, and widespread forecasts of economic slowing in 1989.

SUMMARY OF SURVEY RESULTS

Capital expenditures by the U.S.'s 1,000 largest manufacturers rose by 14.4% in the fourth quarter, after a 13.6% rise in the prior quarter. Altogether, spending on plant and equipment was an impressive 38.2% higher in the fourth quarter of 1988 than one year earlier.

Capital appropriations declined by 0.7% in the third quarter (after a sizable 32% gain in the second quarter), but then rose by 33% in the fourth quarter. Altogether, new appropriations were 50% higher in the fourth quarter of 1988 than one year earlier. Approved but as yet unspent appropriations, were 11.1% higher in the fourth quarter, after a 4.7% rise in the prior quarter (30% higher than one year earlier). Sharply higher new appropriations and outsized increases in the backlog of unspent appropriations suggest capital investment carried sizable momentum into the first half of 1989.

That is also the message conveyed by the survey respondents. Manufacturing executives said that they *plan to raise their capital spending* by 9.4% this year. If so, capital investment will significantly outpace the general economy for the third consecutive year—based on the Board's forecast of a nominal rise in GNP of about 7.5% this year.

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CURRENT INDUSTRIAL CONDITIONS

Industrial conditions (over the twelve months ending in March 1989) were very strong. There is widespread expectation that the vigorous expansion will cool over the next twelve months, leading to a new expansion.

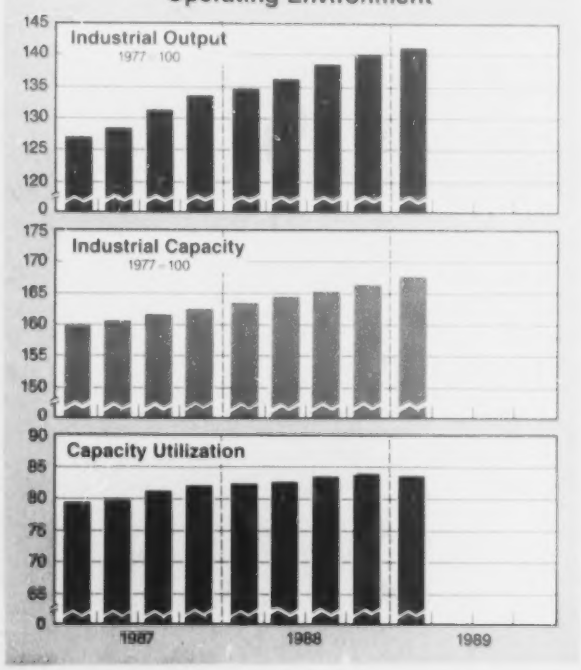
• Industrial production: The output of consumer durables was 15% higher in March 1989 than one year earlier. Producers equipment, except defense related, was 8% higher. But total industrial production is expected to be 0.8% lower 12 months from now, as a result of cuts in the production of consumer durables.

• Capacity utilization for durable-goods industries stood at 83% in March 1989, up sharply from 80.6% one year earlier. Utilization in nondurable-goods industries stood at 86.3% in March, compared with 85.8% one year earlier. As the accompanying chart shows, durable-goods output was 6% higher in the first quarter of 1989 than one year earlier, while capacity to produce increased by 2.4 percent. Nondurable-goods output was 5.1% higher, but capacity to produce increased by 4.3 percent.

• New orders for durable goods, except defense related, were 8.9% higher in March 1989 than one year ago. But the ratio of unfilled to filled orders was only 10.2% higher. Thus, despite very expansive production schedules, order books continued to fill.

• Durable inventory, except cars at the retail level, was 8.2% higher in February 1989 than one year ago. That rapid build-up, however, merely kept the inventory-to-sales ratio at its year-earlier level. If the economy cools in 1989, as anticipated, it will do so with lean, not an overabundant, inventory.

Operating Environment



Sources: Federal Reserve Board, The Conference Board

• Strong industrial conditions over the last year increased price pressures. In March, raw metal prices were a full 29% higher than one year earlier. Yet sharply higher metal prices have apparently had little negative impact on plant and equipment spending.

• Overall, the GNP deflator was 5.1% higher in the first quarter of 1989 than one year earlier. It is expected to rise by 4.7% over the current four-quarter span, assuming the economy cools down during this period.

• Exports of manufactured goods were 18.7% higher in February 1989 than one year ago. Imports were only 6.5% higher. If the economy cools, these imports will grow even more slowly. But export growth, which is dependent on economic growth abroad (now rising moderately), is likely to stay strong. The impact on the domestic economy, then, will remain positive. However, prices of imported goods were 3.6% higher in the fourth quarter of 1988 than one year earlier, while prices of U.S. exports were 6.4% higher. That domestic prices are rising faster than import prices may limit that positive trend.

• Imports of capital goods, except cars, were 13.4% higher in February 1989 than one year earlier. Exports of capital goods, except cars, were 8.8% higher. Strong domestic capital spending, then, is still widening the trade imbalance on these items, a trend unlikely to end this year.

• Manufacturing productivity was 3.5% higher in the fourth quarter of 1988 than one year earlier; hourly compensation was only 4.6% higher. Thus, the rise in unit labor costs, 1.1% versus one year earlier, remained quite modest, boosting profit margins and, providing the wherewithal for the surge in investment. Still, if economic growth slows as expected, declining productivity growth will hike unit labor costs and squeeze profit margins.

• Manufacturing after-tax profits were 37% higher in the fourth quarter of 1988 than one year earlier. Profits averaged 5.3 cents (on one dollar of sales) in the fourth quarter, compared with 4.2 cents one year earlier.

• Total business after-tax profits are expected to be flat after the first quarter of 1989, at least through the fourth quarter of 1989. Moreover, taking dividend payout into consideration, retained earnings are likely to be lower in the fourth quarter of 1989 than in the second quarter.

• Nonresidential fixed investment was 8.8% higher in the first quarter of 1989 than one year earlier. The rate of increase is expected to slow to a more modest 2.9% over the next four quarters.

• A Commerce Department survey of foreign affiliates of U.S. corporations found that they are planning to raise spending on plant and equipment by 12% in 1989.

FOURTH-QUARTER SURVEY RESULTS: INDUSTRY DETAIL

DURABLE-GOODS MANUFACTURING: Despite a quite rapid rise in industrial production, the ongoing boom in capital investment has brought new productive capacity on stream, keeping capacity utilization rates from soaring.

Survey results suggest no slowing in the pace of new investment.

- Total appropriations for durable-goods industries were 27.7% higher in the fourth quarter of 1988 than in the fourth quarter of 1987, compared with a 50% gain for all manufacturing.
- Total expenditures by durable-goods industries were 26.1% higher in the fourth quarter of 1988 than one year earlier, compared with a 38.2% rise for all manufacturing.
- The backlog of unspent appropriations for durable-goods industries was 22.4% higher in the fourth quarter of 1988 than one year earlier, compared with a 30% rise for all manufacturing.

Capital spending by durable-goods manufacturers rose by only 3.6% in the fourth quarter, following a 15.5% increase in the prior quarter. But while spending growth was slowing, investment intentions rose: New appropriations rose 24.4% in the fourth quarter, after a meager 2.6% rise in the prior quarter. The largest increases in new appropriations were recorded by durable-manufacturers who process raw materials. These primary processors sharply lowered the pace of their new appropriations earlier in the year. For example, after a sizable 93% rise in new appropriations in the stone, clay, and glass industry in the second quarter of 1988, newly approved spending plans fell by 17% in the third quarter. But new appropriations then rose by 122% in the fourth quarter.

The turnaround in spending intentions was even more pronounced in the *nonferrous metals industry*. New appropriations fell 41% in the second quarter, by 3% in the third quarter, but soared 99% in the fourth quarter. These data suggest that early in 1988 primary processors were wary about stepping up investment plans, as analysts warned about economic cooling. The fourth quarter data may indicate that these producers have decided to move forward despite such omens.

In contrast, some durable-goods industries that had greatly increased their capital spending earlier in 1988, pulled back in the fourth quarter. Newly approved spending plans in *motor vehicles*, for example, increased by 16.5% in the third quarter but were flat in the fourth quarter. Appropriations in the *iron and steel* industries shot up by 250% in the third quarter but fell by 11% in the fourth quarter. It would seem that these two groups, having launched major new initiatives, were willing to follow through on that agenda but unwilling to saddle it with another round of large-scale projects.

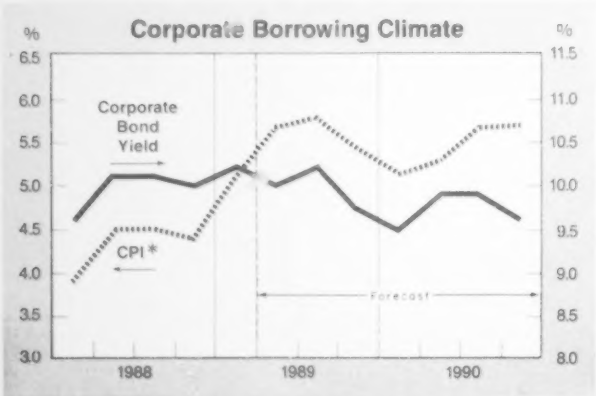
One industry appears to be stuck on a roller coaster. Earlier in the decade, the *computer and peripheral group* appeared caught up in a severe downward spiral only to break out as both goods and service producers launched major pushes to computerize operations. Some speculate that this field has again entered a downturn, and the latest capital spending survey lends support to that view. New plant and equipment spending by the electrical machinery industry fell by 12% in the fourth quarter and newly approved spending plans declined by 18 percent. Moreover, the backlog of unspent appropriations has grown very slowly over the last three quarters. Thus, actual spending is subsiding and there is not a large overhang of incomplete projects to work off.

NONDURABLE-GOODS MANUFACTURING: Capital spending has been stronger among the nondurable-goods manufacturers than the durables group, for obvious reasons: Capacity utilization has been higher among the nondurables. The most significant finding in the fourth quarter survey was the very strong rise in spending plans:

- Total appropriations were 78% higher in the fourth quarter of 1988 than one year earlier, versus a 27.7% rise for durable-goods industries.
- Capital spending rose 52%, versus a 26% rise for the durable-goods industries.
- The backlog of unspent appropriations rose 37%, versus a 22% rise for durable-goods industries.

The *rubber industry* was the prime capital investor among nondurable-manufactures in the third quarter. The only surprise in the fourth quarter was that this industry stepped up its pace. The numbers here suggest nothing less than a major overhaul. New appropriations rose by 109% in the third quarter, followed by a whopping 239% rise in the fourth quarter. Nor are these down-the-road plans: Capital spending rose by 136% in the fourth quarter. The sheer size of new spending plans augmented the backlog of unspent appropriations by 80% in the fourth quarter. All these data suggest a major initiative of some urgency.

Petroleum is another industry seemingly on the verge of a major new initiative: Capital spending shot up by 123% in the fourth quarter, while new appropriations rose 157 percent. First, 1988 was a watershed year for oil, as the United States began importing more oil than it produced. Second, oil prices may have entered a new long-term upward trend, absent short-term reversals. These factors, and others, suggest that this industry, severely hard hit by the 1985 oil price collapse, seems to have embarked on a major overhaul, requiring very large increases in capital investment plans.



* Annualized percentage change from previous quarter

AVAILABILITY & ADEQUACY— CAPACITY & FUNDING

One reason why capital investment strength was expected to carry into 1989 is continued concern about the *adequacy of capacity*. A full 12% of the durable-goods respondents said in the fourth quarter that their existing facilities were insufficient relative to the rate of new orders, about double the figure from the prior quarter. Only 5% of the nondurable-respondents were concerned about inadequate facilities, no change from the prior quarter.

SOURCE OF FUNDS

Despite continuing strong investment plans, concern about the adequacy of *funding* showed up in the fourth quarter. The durable-goods respondents said that 74% of the funding for the first half of 1989 would be from retained earnings and depreciation, down from 90% in the prior quarter. Their nondurable-goods counterparts said 90%, down from 95% in the prior quarter. If the internal funding holds up, so will investment plans. If not, delays and cancellations will undoubtedly occur.

Ken Goldstein
May 1, 1989

TABLE 1
SEASONALLY ADJUSTED DATA IN MILLIONS OF CURRENT DOLLARS

	CURRENT DOLLARS						PERCENT CHANGE OVER PRIOR QUARTER			
	III-87	IV-87	I-88	II-88	III-88(r)	IV-88(p)	I-88 to II-88	II-88 to III-88	III-88 to IV-88	IV-87 to IV-88
ALL MANUFACTURING										
Opening backlog	74,635	74,554	78,061	78,709	87,465	91,572				
Newly approved	29,561	35,909	30,846	40,686	40,384	53,774	31.9%	-0.7%	33.2%	49.8%
Canceled	2,261	2,582	786	212	240	2,415				
Capital expenditures	27,381	29,820	29,412	31,718	36,037	41,216	7.8%	13.6%	14.4%	38.2%
Closing backlog	74,554	78,061	78,709	87,465	91,572	101,715	11.1%	4.7%	11.1%	30.3%
MANUFACTURING EX. PETROLEUM										
Opening backlog	55,369	57,685	62,514	62,463	70,524	75,052				
Newly approved	26,503	32,084	25,470	35,475	37,636	46,703	39.3%	6.1%	24.1%	45.6%
Canceled	750	1,547	372	-100	28	62				
Capital expenditures	23,437	25,708	25,149	27,514	33,080	34,623	9.4%	20.2%	4.7%	34.7%
Closing backlog	57,685	62,514	62,463	70,524	75,052	87,070	12.9%	6.4%	16.0%	39.3%
DURABLE GOODS										
Opening backlog	28,498	31,430	35,236	33,637	37,308	38,389				
Newly approved	17,208	20,245	14,310	20,261	20,791	25,859	41.6%	2.6%	24.4%	27.7%
Canceled	306	402	129	-320	184	901				
Capital expenditures	13,970	16,037	15,780	16,910	19,526	20,226	7.2%	15.5%	3.6%	26.1%
Closing backlog	31,430	35,236	33,637	37,308	38,389	43,121	10.9%	2.9%	12.3%	22.4%
NONDURABLE GOODS										
Opening backlog	46,137	43,124	42,825	45,072	50,157	53,183				
Newly approved	12,353	15,664	16,536	20,425	19,593	27,915	23.5%	-4.1%	42.5%	78.2%
Canceled	1,955	2,180	657	532	56	1,514				
Capital expenditures	13,411	13,783	13,632	14,808	16,511	20,990	8.6%	11.5%	27.1%	52.3%
Closing backlog	43,124	42,825	45,072	50,157	53,183	58,594	11.3%	6.0%	10.2%	36.8%

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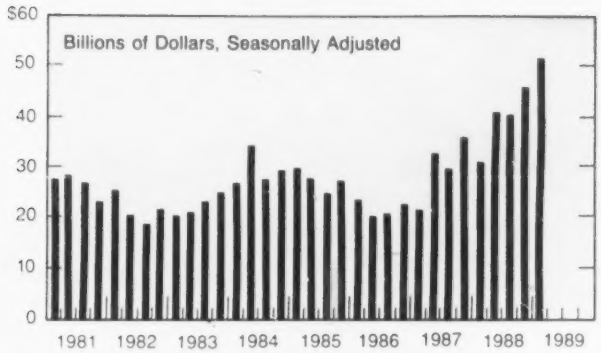
Economic and Business Environment Program

Manufacturing Investment Outlook

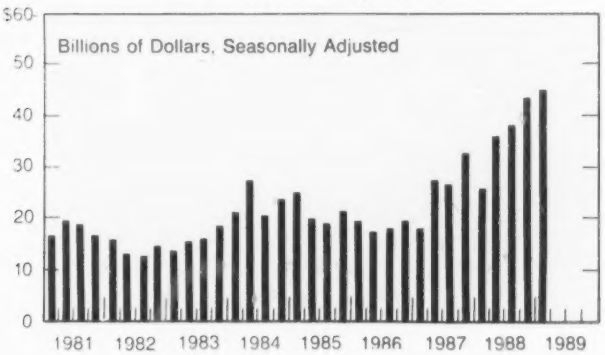
Volume 3, Number 3 Summer 1989

Capital Appropriations
Largest Manufacturers



Capital Expenditures
Largest Manufacturers

Capital Appropriations
Manufacturers Excluding Petroleum



Source: The Conference Board

OVERVIEW:

Capital spending has softened but *spending plans* remain bullish. The two-year surge in U.S. business spending on plant and equipment slowed in the fourth quarter of 1988 and the first quarter of 1989, according to The Conference Board's latest survey of **Capital Appropriations and Expenditures.** That is not surprising, given that the earlier surge was heavily dependent on internal funds that are now more scarce. But continued strong investment plans suggest that, if growth in internal funding picks up, the money will be earmarked for more new plant and equipment.

The *investment plans* appear particularly aggressive given the current context—the prospect of slower economic growth, with more than a slight chance of recession, elevated interest rates, inflation concern, and the recent strengthening of the dollar. To be sure, the emphasis remains more on buying new equipment, amid criticism that without more spending on new plant, competitive capacity could be limited down the road. Still, bullish investment plans now, despite some near-term economic storm warnings, suggest that U.S. business is focused on a longer term horizon.

SUMMARY OF SURVEY RESULTS

Capital expenditures by the U.S.'s largest manufacturers were essentially flat in the first quarter, after a 2.1% decline in the prior quarter. Nevertheless, total spending on plant and equipment was 20.1% higher in the first quarter of 1989 than one year earlier.

Capital appropriations increased by 10.4% in the first quarter, following a 12.1% rise in the prior quarter. Altogether, new appropriations were a whopping 62.1% higher in the first quarter of 1989 than one year earlier. With new spending plans continuing to rise sharply while ongoing spending leveled off, the backlog of unspent appropriations, already very high by historical standards, continued to build. Approved but as yet unspent appropriations were 14.3% higher in the first quarter, following a 9.4% rise in the prior quarter (45.5% higher than one year earlier). The buildup in new appropriations and an elevated backlog of unspent appropriations suggest that capital investment will carry untapped momentum into the second half of 1989.

Manufacturing executives reported that they plan to raise their *capital spending* by 18% this year, which is double the targets cited in the prior quarterly survey. This suggests investment will continue to outpace the economy for the third consecutive year—based on the Board's forecast of a nominal rise in GNP of about 7.5% this year.

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CURRENT INDUSTRIAL CONDITIONS

Industrial conditions over the twelve months ending in May 1989 were very strong amid signs that the economy was beginning to cool. The expectation remains that the vigorous expansion will moderate over the next twelve months—possibly giving way to recession toward year end.

• Industrial production: The output of consumer durables was 4.4% higher in May 1989 than one year earlier. Producers equipment, except defense related, was 6.9% higher. Total industrial production is expected to be no higher than its current level 12 months from now, as the rise in output of both consumer and producer goods slows.

• Capacity utilization for durable-goods industries stood at 82.5% in May 1989, compared with 81.8% one year earlier. Utilization in nondurable-goods industries stood at 86% in May, compared with 85.4% one year earlier. As the accompanying chart shows, durable-goods output was 5.4% higher in the first quarter of 1989 than one year earlier, while capacity to produce increased by 2.9 percent. Nondurable-goods output was 5.4% higher, but capacity to produce increased by 4.3 percent.

• New orders for durable goods, except defense related, were 8.4% higher in May 1989 than one year ago. But the ratio of unfilled to filled orders was only 11.7% higher. Producers, perhaps wary of a predicted cooling in the economy, have slowed the rise in production.

• Durable inventory, except cars at the retail level, was 6.8% higher in April 1989 than one year ago. Despite that rapid buildup, the inventory-to-sales ratio actually fell a notch over the last 12 months. Still, producers are apparently worried enough about unintended inventory to have slowed the pace of filling new orders.

• Strong industrial conditions have put great upward pressure on prices. In May, raw metal prices were a full 27% higher than one year earlier. Higher metal prices, though, have not hurt plant and equipment spending, and industrial conditions are cooling.

• Overall, the GNP deflator was 4.8% higher in the second quarter of 1989 than one year earlier. It is expected to rise by 5% over the next quarters, assuming economic growth slows.

• Exports of manufactured goods, excluding aircraft and parts, were 37.5% higher in April 1989 than one year ago. Imports were only 7% higher. A cooling of domestic industrial markets may slow the rise in imports, notwithstanding a rising dollar. But the sharp rise in exports is more dependent on strong economic growth abroad and, therefore, is likely to continue rising rapidly.

• Prices of imported goods were 4.1% higher in the second quarter of 1989 than one year earlier, while prices of U.S. exports were 3.7% higher. But with the dollar now rising sharply, prices of imports (and import-competing goods) will probably advance more slowly.

• Imports of capital goods, except cars, were 15% higher in April 1989 than one year earlier. Exports of capital goods, except cars, were 16% higher. Sales of imported capital goods are likely to remain as strong as overall domestic investment, while big increases in exports of capital goods are tied to continued rapid economic expansion among the U.S.'s major trading partners.

• Manufacturing productivity was 3.1% higher in the first quarter of 1989 than one year earlier; hourly compensation was only 4.2% higher. Thus, the rise in unit labor costs, 1% versus one year earlier, remained quite modest, boosting profit margins and generating the wherewithal for investment. If economic growth slows as expected, declining productivity growth could hike unit labor costs and squeeze profit margins.

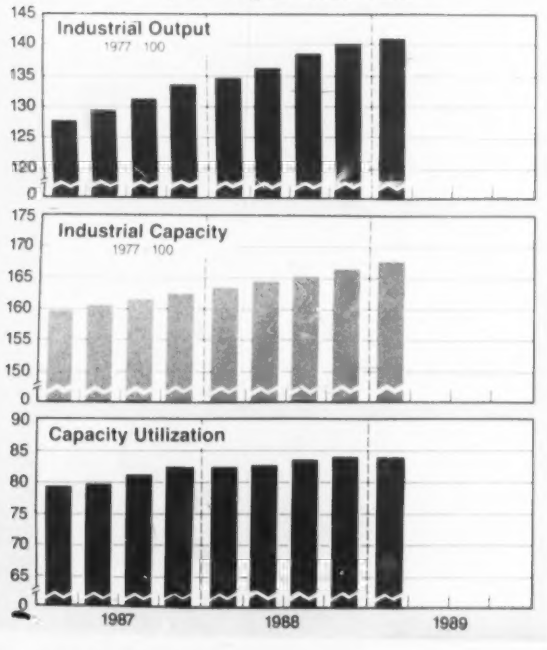
• Manufacturing after-tax profits were only 2.2% higher in the second quarter of 1989 than one year earlier. Retained earnings—profits minus cash dividends—actually fell by 13.8 percent. That decline was no doubt a factor in the slowing of investment growth.

• Total business after-tax profits are expected to rise modestly in the third quarter of 1989 and then remain level over the next two quarters. Total cash flow, after dividends, will likely increase by about 4.3% over the next four quarters.

• Nonresidential fixed investment was 7.6% higher in the second quarter of 1989 than one year earlier. The pace of investment is likely to reach 5.9% over the next four quarters, almost exclusively for equipment purchases.

• A Commerce Department survey of foreign affiliates of U.S. corporations found that they are raising spending on plant and equipment by 12% in 1989. Another Commerce survey showed that as of 1987 just about one-quarter of the $1 billion foreign investment in the United States was

Operating Environment



Sources: Federal Reserve Board, The Conference Board

in manufacturing facilities—with Canada, Japan, and the United Kingdom, in roughly equal shares, responsible for a little over half of total foreign investment.

FOURTH-QUARTER SURVEY RESULTS: INDUSTRY DETAIL

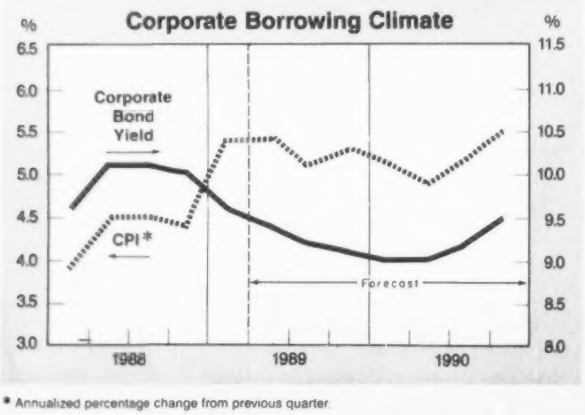
DURABLE-GOODS MANUFACTURING: Earlier, a quite rapid rise in capital investment kept capacity utilization rates from soaring. More recently, industrial production growth has slowed so that the lack of stronger new investment has not pushed capacity utilization to its limit. Finally, survey results suggest investment may strengthen again.

- Total appropriations for durable-goods industries were 12.8% lower in the first quarter of 1989 than two quarters earlier, compared with a 23.8% rise for all manufacturing.
- Total expenditures by durable-goods industries were 12.8% lower in the first quarter of 1989 than two quarters earlier, compared with a 2% decline for all manufacturing.
- The backlog of unspent appropriations for durable-goods industries was 19.7% higher in the first quarter of 1989 than two quarters earlier, compared with a 25% rise for all manufacturing.

As the above data indicate, capital investment declined more sharply among durable goods manufacturers than nondurable goods producers. But new appropriations by the durable-goods industries also declined, whereas they rose in the nondurable-goods sector.

A close look at the individual *durable-goods industries* suggests that the sector totals may be overstating the cooling in investment trends. But one industry where that is probably not the case is *Iron & Steel*—new appropriations fell 60% over the last two quarters. Economic data suggest that Iron and Steel may be again facing a falling market in the wake of renewed dollar strength .

Fabricated metals, in some sense, represent the down-the-line outlet for iron and steel output. This quintessential boom-and-bust industry is most likely to be buffeted by an overall slowing of economic growth, as well as the rising dollar. Both capital investment and new appropriations are declining here, whether one looks at the last quarter, last two quarters, or year-over-year comparison. Still, the backlog of approved but unspent appropriations continues to build and that suggests that shelved plans could be put into play if the economic environment improves.



* Annualized percentage change from previous quarter

Electrical machinery companies comprise another durable-goods industry with developing weakness in investment plans. Computer and peripheral producers are no small part of this group. The computer field underwent a severe downward spiral earlier this decade only to pull out as business in general embarked on a major push to computerize operations. That development seems to have crested, at least in some respects, leaving the computer and peripheral group again facing retrenchment.

At the other end of the spectrum, investment by *nonferrous metal* producers is going through the roof. Over the last two quarters, while total durable-goods investment went flat, new spending by these producers rose 12.6% and new appropriations tripled. Substitution of lighter, and therefore less energy-intensive, materials may account for this sizable growth, and help explain the problems faced by ferrous metal producers. Whatever the cause, the effect is a significant buildup in investment and investment intentions.

Another durable-goods producer with sharply rising new investment is the *nonauto transportation* group. Commercial aircraft producers are so backed up with new orders that customers are being told that planes ordered today will be delivered in about five years. Assuming this anecdotal evidence accurately reflects production difficulties, the push to increase capital investment comes as no shock.

NONDURABLE-GOODS MANUFACTURING: Capital spending remains stronger among the nondurable-goods manufacturers than among the durables group because capacity utilization remains higher:

- Total appropriations were 63% higher in the first quarter of 1989 than two quarters earlier, versus a 12.8% decline for durable-goods industries.
- Capital spending rose 10.8%, versus a 12.8% fall for the durable-goods industries.
- The backlog of unspent appropriations rose 29%, versus a 19.7% rise for durable-goods industries.

The investment data for the *nondurable-goods producers* may also be understating the case a little. For example, the *paper* industry increased its capital investment by only 5.2% over the last two quarters, and lowered new appropriations by almost 50 percent. Yet this is an industry that has been most squeezed by high capacity utilization. Perhaps, the comparison of investment spending and intentions over the last two quarters merely reflects the strength of the prior push for new plant and equipment spending. It would follow that, unless the economic environment sours more than most analysts expect, capital investment by this industry is not going to continue to dampen.

Both investment and investment intentions are much stronger among the other nondurable producers than for the paper companies. But nowhere is it as strong as for *food-processing* companies. The numbers are staggering. New

appropriations in just the last two quarters rose by 136%, and appropriations in the first quarter of 1989 were five times the level of only one year earlier. Subsequent survey data collection might trim these numbers. But right now the push to revamp, overhaul, modernize, and restructure competitive productive capacity is nowhere as strong as among food processors.

SOURCE OF FUNDS

Given the weakening of profit growth, it is not surprising that the heavy dependence on internal funding has slackened. Nondurable-goods producers reported that about 88% of their investment this year would be *internally financed.* Only two quarters ago, that figure was closer to 95 percent. For durable-goods producers, the figure for this year is 75%, down from the 85-90% range of only a short while ago.

WHAT TIGHT LABOR MARKET

Analysts are suggesting that *labor shortages* may loom well into the next decade. The thinking is that the current 5-5 1/2% unemployment rate will rise to no more than a 6-6 1/2% if a recession develops, but then fall back into the 5-6% range as a new expansion gets underway, and perhaps hover close to a 5% rate through mid-decade. Only half of the responding executives, who are now making investment decisions that will affect the levels of future productive capacity, said that tight labor markets in the 1990s are a significant factor in their strategic planning. Apparently, decision makers are not overly concerned about labor shortages developing.

Ken Goldstein
June 30, 1989

TABLE 1
SEASONALLY ADJUSTED DATA IN MILLIONS OF CURRENT DOLLARS

	CURRENT DOLLARS						PERCENT CHANGE OVER PRIOR QUARTER			
	IV-87	I-88	II-88	III-88	IV-88(r)	I-89(p)	II-88 to III-88	III-88 to IV-88	IV-88 to I-89	I-88 to I-89
ALL MANUFACTURING										
Opening backlog	74,554	78,061	78,709	87,465	91,572	100,202				
Newly approved	35,909	30,846	40,686	40,384	45,279	50,009	-0.7%	12.1%	10.4%	62.1%
Canceled	2,582	786	212	240	1,368	334				
Capital expenditures	29,820	29,412	31,718	36,037	35,281	35,331	13.6%	-2.1%	0.1%	20.1%
Closing backlog	78,061	78,709	87,465	91,572	100,202	114,546	4.7%	9.4%	14.3%	45.5%
MANUFACTURING EX. PETROLEUM										
Opening backlog	57,685	62,514	62,463	70,524	75,052	86,290				
Newly approved	32,084	25,470	35,475	37,636	42,967	44,017	6.1%	14.2%	2.4%	72.8%
Canceled	1,547	372	-100	28	-515	112				
Capital expenditures	25,708	25,149	27,514	33,080	32,244	32,248	20.2%	-2.5%	0.0%	28.2%
Closing backlog	62,514	62,463	70,524	75,052	86,290	97,947	6.4%	15.0%	13.5%	56.8%
DURABLE GOODS										
Opening backlog	31,430	35,236	33,637	37,308	38,389	44,627				
Newly approved	20,245	14,310	20,261	20,791	23,547	18,129	2.6%	13.3%	-23.0%	26.7%
Canceled	402	129	-320	184	652	-240				
Capital expenditures	16,037	15,780	16,910	19,526	16,657	17,032	15.5%	-14.7%	2.3%	7.9%
Closing backlog	35,236	33,637	37,308	38,389	44,627	45,964	2.9%	16.2%	3.0%	36.6%
NONDURABLE GOODS										
Opening backlog	43,124	42,825	45,072	50,157	53,183	55,575				
Newly approved	15,664	16,536	20,425	19,593	21,732	31,880	-4.1%	10.9%	46.7%	92.8%
Canceled	2,180	657	532	56	716	574				
Capital expenditures	13,783	13,632	14,808	16,511	18,624	18,299	11.5%	12.8%	-1.7%	34.2%
Closing backlog	42,825	45,072	50,157	53,183	55,575	68,582	6.0%	4.5%	23.4%	52.2%

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